

United States of America

Report on January JTG 4-9-11 Meeting (See Chairman's Report of the 3rd Meeting of JTG 4-9-11)

Areas of Agreement

Interference from all NGSO systems to GSO networks should be responsible for 10% of the unavailability time in a GSO network and/or time allowances specified in the performance objectives (BER or C/N) of the GSO network.

EPFD limits should be represented using continuous curves (i.e. epfd as a function of percentage of time).

Aggregate interference levels are converted to single entry levels assuming between 3 to 5 NGSO systems, the exact number to be determined by WP4A, there is a need for regulatory regime that ensures that the aggregate NGSO epfd limits are not exceeded.

Introduction of an appropriate per-satellite PFD mask for NGSO systems may obviate the need for more restrictive EPFD limits to protect Ka-band GSO FSS systems employing adaptive coding. If it can be shown that GSO systems employing adaptive coding are not more sensitive to NGSO interference compared to other GSO systems a PFD mask would not be required.

Areas of Further Work to be conducted by WP4A

Further refine and validate the epfd masks that would be required to protect GSO FSS carriers, contained in the ITU database (Annex II format) and received by the BR by 15 March 1999, and to assess the measures that would be needed to ensure protection of those carriers. Procedure D, included in the preliminary draft Revision of Rec. ITU-R S.1323, would be used for this purpose.

Review the impact of synchronization losses on FSS carriers as it relates to the development of the epfd limits.

Develop a new recommendation to provide continuous curves of epfd versus GSO FSS earth station antenna diameters to be protected, in order for designers of satellite networks to determine whether the protection will be adequate in the case of antenna sizes not to be verified by the BR.

US Preliminary View

The provisional epfd limits need to be modified so that appropriate protection is afforded to GSO Ka-band systems employing various techniques to compensate for rain fade. The JTG agreed that the introduction of an appropriate per-satellite PFD mask for NGSO systems would obviate the currently perceived need for more restrictive EPFD limits to protect Ka-band GSO FSS systems employing adaptive coding. The US supports a PFD mask approach so long as it does not pose undue constraints on NGSO FSS systems and results in EPFDs that are not overly restrictive and protect adaptive coding systems. In order for CITEL to have the full benefit of the results of all technical studies by the ITU on this matter it should consider waiting to develop specific epfd values until the next CITEL PCC-III meeting. In the interim all CITEL Administrations are encouraged to participate in the discussions on this subject at the upcoming meeting of WP4A.

Reasons

Studies to date show that the "provisional limits" from WRC-97 need to be modified to accomplish the ITU WRC-97 and US goal of ensuring the proper conditions for the co-existence of NGSO and GSO systems in order to ensure that they do not impose undue constraints on the development of NGSO and GSO FSS systems. There are further meetings of WP 4A to examine this issue.